IN THE CLAIMS

The status of each claim in the present application is listed below.

Claims 1-7: (Canceled).

8. (Currently Amended): A process for the preparation of alkylarylsulfonates by

a) reaction of a C_4-olefin mixture over a metathesis catalyst to prepare an olefin mixture comprising 2-pentene and/or 3-hexene, and optional removal of 2-pentene and/or 3-hexene,

b) dimerization of the 2-pentene and/or 3-hexene obtained in stage a) in the presence of a dimerization catalyst to give a mixture comprising C_{10-12}-olefins, removal of the C_{10-12}-olefins and removal of 5 to 30% by weight, based on the C_{10-12}-olefins removed, of low-boiling constituents of the C_{10-12}-olefins, such that at least 90% of di- or poly-branched olefins are separated off,

c) reaction of the C_{10-12}-olefin mixtures obtained in stage b) with an aromatic hydrocarbon in the presence of an alkylation catalyst to form alkyl aromatic compounds, where, prior to the reaction, 0 to 60% by weight, based on the C_{10-12}-olefin mixtures obtained in stage b), of linear olefins may additionally be added,

d) sulfonation of the alkyl aromatic compounds obtained in stage c) and neutralization to give alkylarylsulfonates, where, prior to the sulfonation, 0 to 60% by weight, based on the alkyl aromatic compounds obtained in stage c), of linear alkylbenzenes may additionally be added, if no admixing has taken place in stage c),

e) optional mixing of the alkylarylsulfonates obtained in stage d) with 0 to 60% by weight, based on the alkylarylsulfonates obtained in stage d), of linear alkylarylsulfonates, if no admixing has taken place in stages c) and d).

9. (Previously Presented): A process for the preparation of alkylarylsulfonates by

a) reaction of a C_4-olefin mixture over a metathesis catalyst to prepare an olefin mixture comprising 2-pentene and/or 3-hexene and optional removal of 2-pentene and/or 3-hexene,

b) dimerization of the 2-pentene and/or 3-hexene obtained in stage a) in the presence of a dimerization catalyst to give a mixture comprising C_{10-12}-olefins and optional removal of the C_{10-12}-olefins,

c) reaction of the C_{10-12}-olefin mixtures obtained in stage b) with an aromatic hydrocarbon in the presence of an alkylation catalyst to form alkyl aromatic compounds, where, prior to the reaction, additional linear olefins may be added,

d) sulfonation of the alkyl aromatic compounds obtained in stage c) and neutralization to give alkylarylsulfonates, where, prior to the sulfonation, linear alkylbenzenes may additionally be added,

e) optional mixing of the alkylarylsulfonates obtained in stage d) with linear alkylarylsulfonates,

where, in at least one of stages c), d) and e), 5 to 60% by weight, in each case based on the mixtures obtained in the previous stage, of the linear compounds are added and the sum of the additions is not more than 80% by weight.

10. (Previously Presented): The process as claimed in claim 8, wherein the metathesis catalyst in stage a) is chosen from compounds of a metal of group VIb, VIIb or sub-group VIII of the Periodic Table of the Elements.

11. (Previously Presented): The process as claimed in claim 8, wherein, in stage b), a dimerization catalyst is used which comprises at least one element of sub-group VIII of the Periodic Table of the Elements.

12. (Previously Presented): The process as claimed in claim 8, wherein the dimer olefin mixtures obtained in stage b) have an average degree of branching in the range from 1 to 2.5.

13. (Previously Presented): The process as claimed in claim 8, wherein the dimer olefin mixtures obtained in stage b) have an average degree of branching in the range from 1 to 2.0.

14. (Previously Presented): The process as claimed in claim 8, wherein, in stage c), an alkylation catalyst is used which leads to alkyl aromatic compounds which have 1 to 3 carbon atoms with a H/C index of 1 in the alkyl radical.